6KV6

Beam Power Tube

NOVAR TYPE — DARK HEATER

For High-Voltage-Pulse Shunt-Regulator Applications in Color-TV Receivers

ELECTRICAL CHARACTERISTICS

Bogey Values

Heater Voltage	E_h			6.3	V
Heater Current	I_h			1.600	A
Direct Interelectrode Capacitances					
Without external shield					
Grid No.1 to plate	c_{g1-p}			1.2	pF
Input: G1 to (K,G3,G2,H)	c_i			22	pF
Output: P to (K,G3,G2,H)	c_o			9.0	pF

For the following characteristics, see Conditions

Amplification Factor (Triode Connection)[a]	μ	-	4	-	
Plate Resistance (Approx.)	r_p	-	-	6000	Ω
Transconductance	g_m	-	-	9500	µmho
DC Plate Current	I_b	580[b]	-	80	mA
DC Grid-No.2 Current	I_{c2}	24[b]	-	2.4	mA
Cutoff DC Grid-No.1 Voltage. Plate mA = 1	$E_{c1(co)}$	-	-	-42	V

Conditions

Heater Voltage	E_h	Bogey Value		V
DC Plate Voltage	E_b	100	140	V
DC Grid-No.3 Voltage	E_{c3}	0	0	V
DC Grid-No.2 Voltage	E_{c2}	140	140	V
DC Grid-No.1 Voltage	E_{c1}	0	-24.5	V

MECHANICAL CHARACTERISTICS

Operating Position	Any
Type of Cathode	Coated Unipotential
Dimensional Outline (JEDEC 12-96)	See *General Section*
Maximum Overall Length	3.130 in
Maximum Seated Length	2.750 in
Maximum Diameter	1.562 in
Envelope	JEDEC Designation T12
Base[c]	Large-Button Novar 9-Pin with Exhaust Tip (JEDEC Designation E9-88)

TERMINAL DIAGRAM (Bottom View)

- Pin 1 - Grid No.2
- Pin 2 - Grid No.1
- Pin 3 - Cathode
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Grid No.3
- Pin 7 - Grid No.2
- Pin 8 - Do Not Use
- Pin 9 - Plate

H H G3 K G2 G1 IC G2 P 9QU

DESIGN-MAXIMUM RATINGS

For operation as a High-Voltage-Pulse Shunt-Regulator Tube in Color-Television Receivers in a 525-line, 30-frame system

DC Plate Supply Voltage			
(I_b = 0 mA).	E_{bb}	770	V
Peak Positive-Pulse Plate Voltage[c]	e_{bm}	6500	V
Peak Negative-Pulse Plate Voltage.	$-e_{bm}$	1500	V
DC Grid-No.3 Voltage	E_{c3}	75	V
DC Grid-No.2 (Screen-Grid) Voltage	E_{c2}	220	V
Grid No.1 (Control-Grid) Voltage			
Peak negative-pulse value. . . .	$-e_{c1m}$	330	V
Negative dc value (bias)	$-E_{c1}$	75	V
Heater-Cathode Voltage			
Peak	e_{hkm}	+200 / -500	V
Average[d]	$E_{hk(av)}$	100	V
Heater Voltage (AC or DC).	E_h	5.7 to 6.9	V
Cathode Current			
Peak	i_{km}	950	mA
Average[d]	$I_{k(av)}$	275	mA
Grid-No.2 Input.	P_{g2}	3.5	W
Plate Dissipation[e]	P_b	20[f]	W
Envelope Temperature (at hottest point on envelope surface). . . .	T_E	240	°C

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance	$R_{g1(ckt)}$		
For grid-No.1-resistor-bias operation.	-	1	MΩ

[a] With grid No.3 and grid No.2 connected, respectively, to cathode and plate at socket.

[b] This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.

[c] This rating is applicable where the duration of the voltage pulse does not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanning cycle is 10 μs.

[d] Measured with a dc meter.

[e] Adequate circuit precautions must be taken to protect the tube in the absence of grid-No.1 bias.

[f] Plate dissipations up to 24 W maximum are permissible for short periods of time (up to 10 s maximum) provided the maximum envelope-temperature rating is not exceeded.